Chapter 5 – Color

Outline

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**Color And Light**

-without light there is no color; color is a function of light.

-hue: color; the visual sensation created by specific parts of the visible spectrum, enabling us to label it

-pigment: the vehicle for color regardless of medium

*The Science Of Light:*

*-*Sir Isaac Newton created the prism

-prism: a transparent object with triangular ends, usually made of glass, that separates white light passed through it into the visible spectrum.

-Newton used the prism to refract, or deflect, light to recreate the colors of the rainbow (the visible spectrum)

*Bringing Color Full Circle:*

-Newton observed colors at end of spectrum are very similar and subsequently created the color wheel.

-primary pigment colors: colors of pigments that cannot be created by mixing other colors; red, yellow, and blue.

-secondary pigment colors: colors created by mixing primary colors. The secondary colors of pigments different from secondary colors of lights

-tertiary colors: colors created by mixing primary and secondary colors.

*Additive And Subtractive Colors:*

-additive color: color that is created by mixing colored light

-subtractive color: color that is created by mixing pigments. The subtractive primary colors are red, yellow, and blue

-White light results from the overlap of red, blue, and green light; that’s why they are the primary additive colors

- the overlap of two over the primary additive color rays create lighter colors called secondary additive colors.

-subtractive color refers to the mixing of pigments, dyes, and inks rather than light

- color is perceived based on absorption, or subtraction, of light

-primary subtractive colors are cyan, magenta, and yellow

*Cool And Warm Colors:*

-when the human eye fouses on color, muscular movements in the eye forcus warm colors to advance toward the eye and cool colors to move away from it. That’s why color can be used to represent depth

**Properties Of Color**

-physical properties include wavelength, light absorption, and reflection

-perceptional properties include can not be measured with scientific instruments and are based on the interactivity of light receptors-cone cells- in the human eye with the visible light spectrum.

*Hue:*

-hue: pure color as it appears on color wheel. Black, white, and gray are considered not hues, but neutral colors, because they are not on the visible spectrum

*Value:*

-value refers to the lightness or darkness of a hue- the degree of luminosity

-value can be changed using black or white; black creates shades, white creates tints, gray creates tones

-high key colors vs low key colors differentiated by value and brightness

*Intensity, Chroma, And Saturation:*

-intensity, chroma, and saturation all refer to the brightness of dullness of a color

**Color Mixing**

*Visual Color Mixing In Practice:*

-mixing colors physically can diminish their purity and intensity and be very hard to recreate, that’s why some artists use visual color mixing.

-visual color mixing is putting dabs of pure color side by side and close enough to eachother on the canvas that the viewers eye does the mixing itself

*Physical Color Mixing In Practice:*

*-*the twelve-color wheel develops from the concept of triads, or groups of three.

-primary triad: the group of three primary colors identified by the placement of an equilateral triangle over a twelve-point color wheel with yellow at the top.

-secondary triad: the group of three secondary colors (orange green and violet) identified by the placement of an inverted equilateral triangle over a twelve-point color wheel with yellow at the top

-intermediate triads: colors created with the mixture of a primary color and its adjacent secondary color

-black can be defined as the absence of color

**Color And Principles Of Design**

-color can be the unifying element in a work with many components or add variety to compositions whose palette might otherwise seem monotonous

*Color And Emphasis:*

-color can be used to symbolize and place specific emphasis on underlying themes or messages found within the image and its imagery

*Color And Balance:*

-color plays a critical and highly influential role in achieving visual balance in a composition; in terms of visual weight, attraction, or emphasis

**Color Schemes: Harmony And Disharmony**

-color harmony is achieved when schemes are applied to a piece.

-disharmony describes colors that class with one another

*The Monochromatic Color Scheme:*

-monochromatic color scheme:a manner of using color in which one color dominates and is sometimes combined with its various tints and shades(black and white)

*The Analogous Color Scheme:*

-analagous colors are adjacent on the color wheel and are more similar to each other than to colors elsewhere in the spectrum

*Complementary Color Scheme:*

-based on colors that are across from one another on the color wheel; colors that tug equally on he eye

-The dramatic contrasts found in complementary color schemes can heighten the expressive or emotional quality of a work

*Split-Complementary Color Schemes:*

-uses a color along with the two colors adjacent to its complementary color

-effect is dramatic but not as extreme as that of a strict complementary scheme

-colors are still quite powerful but somewhat easier on the eye

*Triadic Color Schemes:*

-triadic color scheme: equilateral triangle connects the three primary colors on color wheel or any three within the triangle when you shift them all equally (orange green and violet vs red yellow blue)

- the effect of primary triads are more dramatic than second triads which are much subtler

*Color Disharmony:*

-color discord: the result when colors that do not balance one another are used, as in colors that are neither analogous nor complementary

-complementary colors or colors of equal value and intensity will each fight for attention and works of art that feature unpredictable and somewhat jarring color combinations will appear stimulating, surprising, forceful, and impassioned

*Local, Optical, And Arbitrary Color:*

-local color: the color that we typically associate with the natural appearance of things. (ie sky is blue and sun is yellow)

-optical color: the depiction of colors as they are perceived under different lighting conditions

-arbitrary/subjective color: the use of a color that is not normally associated with the subject being depicted

-artists use subjective color to sometimes convey emotion or to try and find the pictorial equivalent of inner feelings

*Color And Symbolism:*

-the connectedness between emotion and color often explains an artists’ palette choices.